

-10-

Claims

1. In combination with a mounting surface out of which a threaded hole opens and with a target which rotates in front of the surface about an axis that is oriented at a steep angle with respect to the surface,
 5 and with a screw having a threaded shank that threads into the hole and a head at the end of the shank;

a sensor for monitoring the rotation of the target; said sensor comprising:

- 10 a housing located along the mounting surface and having a slot that is aligned with the threaded hole, the housing along the slot being formed from a deformable material and containing a permanent indentation that receives a portion of the screw, the indentation having been formed by the screw itself and being of a configuration that prevents displacement of the slot along the screw when the portion of the screw is in the indentation; and

- 15 a sensing element located in the housing and being capable, in response to rotation of the target, of producing a signal that reflects the angular velocity of the target;

- whereby the sensor, should it be removed from the mounting surface by withdrawing the screw from the threaded hole, may be reinstalled in the same position by again threading the screw into the hole such that the portion of it is received in the indentation.

2. The combination according to claim 1 wherein the housing has a front face; wherein the slot opens out of the front face; and wherein the deformable material forms a rim along the slot, with the rim projecting beyond the front face.

3. The combination according to claim 2 wherein the rim on the housing contains the indentation and the head of the screw is received in the indentation.

4. The combination according to claim 1 wherein the housing has a front face and a back face; wherein the slot opens out of both faces and has side walls which taper downwardly toward the back face so that the

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-11-

slot is wider at the front face than it is at the back face; and wherein the deformable material is located along the side walls of the slot.

5 5. The combination according to claim 4 wherein the indentation opens out of the tapered side walls of the slot and is configured to receive the shank of a screw.

6. The combination according claim 1 wherein the slot is one of two slots in the housing, and the slots are parallel; wherein the threaded hole is one of two holes that open out of the mounting surface; and wherein the screw is one of two screws, with each screw being in a different slot and
10 threaded into a different hole.

7. The combination according to claim 1 wherein the housing includes a sacrificial rim which projects beyond the sensing element a prescribed distance to establish a known gap between the target and the sensing element.

15 8. A process for installing a speed sensor against a mounting surface out of which a threaded hole opens so that the speed sensor can monitor the rotation of a target that revolves in front of the mounting surface about an axis oriented at a steep angle with respect to the surface, the sensor including a housing having a slot and along the slot being formed
20 from a deformable material, the sensor further including a sensing element located in the housing and being capable, in response to rotation of the target, of producing a signal that reflects the angular velocity of the target, said process comprising:

25 placing the housing of the sensor against the mounting surface with the slot in the housing aligned with the threaded hole that opens out of the mounting surface;

inserting a screw having a threaded shank and a head into the slot in the housing;

30 positioning the housing along the mounting surface with the correct gap between the sensing element and the target;

with a portion of the screw forming a permanent indentation in the housing along the slot, with the indentation being configured such that.

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-12-

when the portion of the screw that formed it is in the indentation, the housing cannot be displaced along the slot; and
threading the screw into the threaded hole.

9. The process according to claim 8 wherein the head of the
5 screw forms the indentation.

10. The process according to claim 8 wherein the housing has a front face; wherein the slot opens out of the front face; wherein the deformable material forms a rim along the slot, with the rim projecting beyond the front face, and wherein the head of the screw forms the
10 indentation in the rim.

11. The combination according to claim 8 wherein the shank of the screw forms the indentation.

12. The process according to claim 8 wherein the housing has a front face and a back face; wherein the slot opens out of both faces and has
15 side walls which taper downwardly toward the back face so that the slot is wider at the front face than it is at the back face; wherein the deformable material is located along the side walls of the slot, and wherein the shank of the screw forms the indentation in the side walls of the slot.

13. The process according to claim 8 and further comprising:
20 withdrawing the screw from the threaded hole;
removing the sensor from the mounting surface;
thereafter placing the sensor along the mounting surface with its slot aligned with the hole;

inserting the screw through the slot and threading it into the hole, with
25 said portion of the screw being received in the indentation;

whereby the sensor assumes the same position along the mounting surface.

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Page 7/7

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